Inventory Web Service

Users Guide

USGS / EROS

March 10, 2010

Revision Sheet

Release No.	Date	Revision Description
	07/29/2009	Original
Rev. 1	11/04/2009	Added JSON Interface information
Rev. 2	12/16/2009	1. New formatting for this document 2. Additional examples
Rev. 3	03/10/2010	1. Added new method information 2. Added JSON2 interface information

Inventory Web Service Users Guide

TABLE OF CONTENTS

1 GENERAL INFORMATION

1.1 Introduction

The USGS Seamless and Tiled Server functionality has recently been expanded to provide a set of webservices to the developer that can be incorporated into custom applications. This document discusses how to use the Inventory web service to obtain dataset information the USGS Seamless and Tiled Server data holdings. There are two additional web services that can be used to obtain the full resolution data.

Inventory Service. This is a data discovery service. This service will provide information about what data is available over a particular area of interest. The addition of new datasets and demotion of older datasets from on-line systems to near-line systems is an ongoing process. Updates to the Inventory Service occur on a monthly basis. Efforts are currently underway to include in the Inventory Service all of the datasets currently available through the USGS Seamless Server.

Request Validation Service. Utilizing dataset information obtained from the previous call to the Inventory Service and a user-defined area of interest, this service verifies and validates the information, and then returns to the user fully parameterized URL(s) that can be used by the Download Service.

Download Service. This service initiates a request for data, queries the system to obtain a job status, and returns the requested data to the user.

Orthoimagery data that is no longer considered the "best available" is removed from on-line systems and map services on a periodic basis. When this occurs, the dataset is clipped into pre-packaged zip files and stored on near-line systems so that it can still be obtained by the public. These datasets currently show up in the Inventory Service with a STATUS = Tiled.

1.2 Organization of the Manual

Section 1 provides a general description of the system.
Section 2 provides a description of the SOAP interface to the Inventory Web Service.

- This interface expects a regular REST URL request and returns a SOAP response.

Section 3 provides a description of the JSON interface to the Inventory Web Service.

- This interface expects a JSON request and returns a JSON response.

Section 4 provides a description of the JSON2 interface to the Inventory Web Service.

- This interface expects a regular REST URL request and returns a JSON response.

1.3 Acronyms and Abbreviations

Acronym	Definition
WMS	Web Map Service
SDDS	Seamless Data Distribution Server
TDDS	Tiled Data Distribution Server
WSDL	Web Service Description Language

2 SOAP INTERFACE

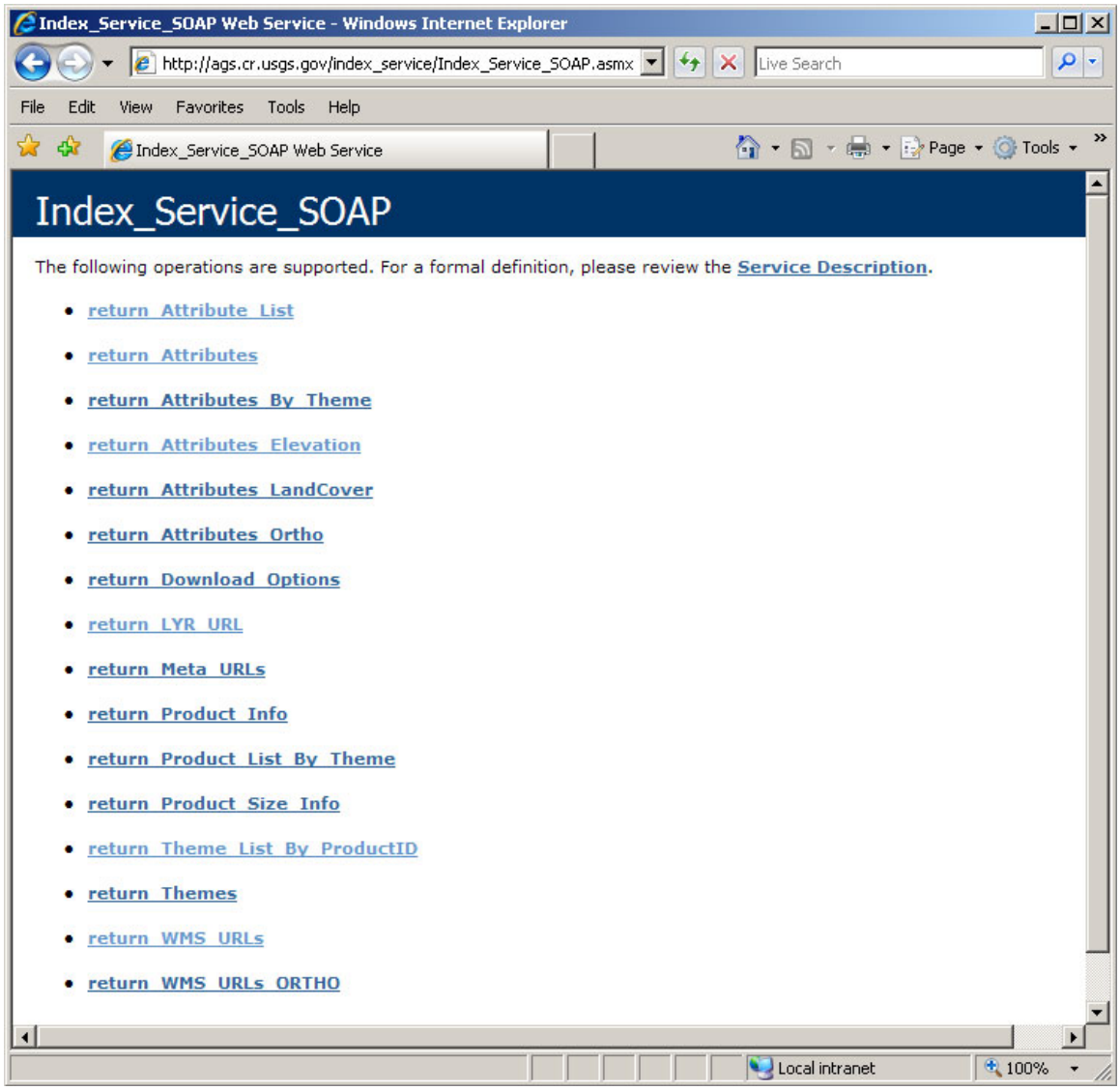
2.1 Overview

Use the following link to the web service description language (wsdl) page to examine the available methods and necessary data types.

http://ags.cr.usgs.gov/index_service/Index_Service_SOAP.asmx?wsdl

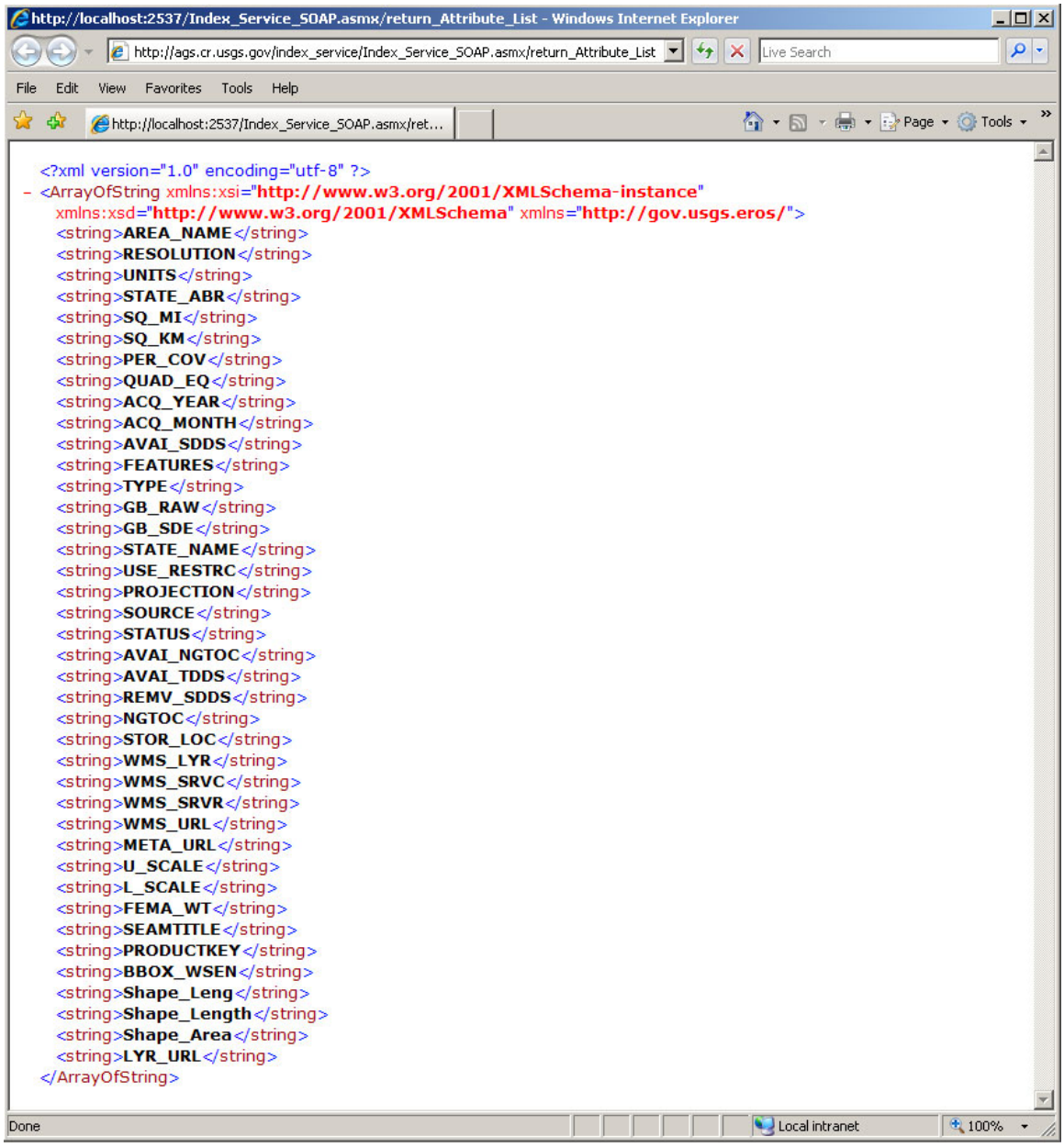
A simple test page is also available for use in a browser to see the methods that can be called in the Inventory Service:

http://ags.cr.usgs.gov/index_service/Index_Service_SOAP.asmx



2.2 return_Attribute_List

This method returns a list of ALL of the attributes that are available for querying per dataset. Note that each of these attributes is not guaranteed to be populated for every dataset, although most are. For example, a "view-only" dataset will have a blank entry for the PRODUCTKEY attribute which designates the USGS internal download code for that dataset. Please refer to the document "Inventory Web Service Attribute Descriptions" for a text description of the meaning of each attribute and possible values for each attribute.

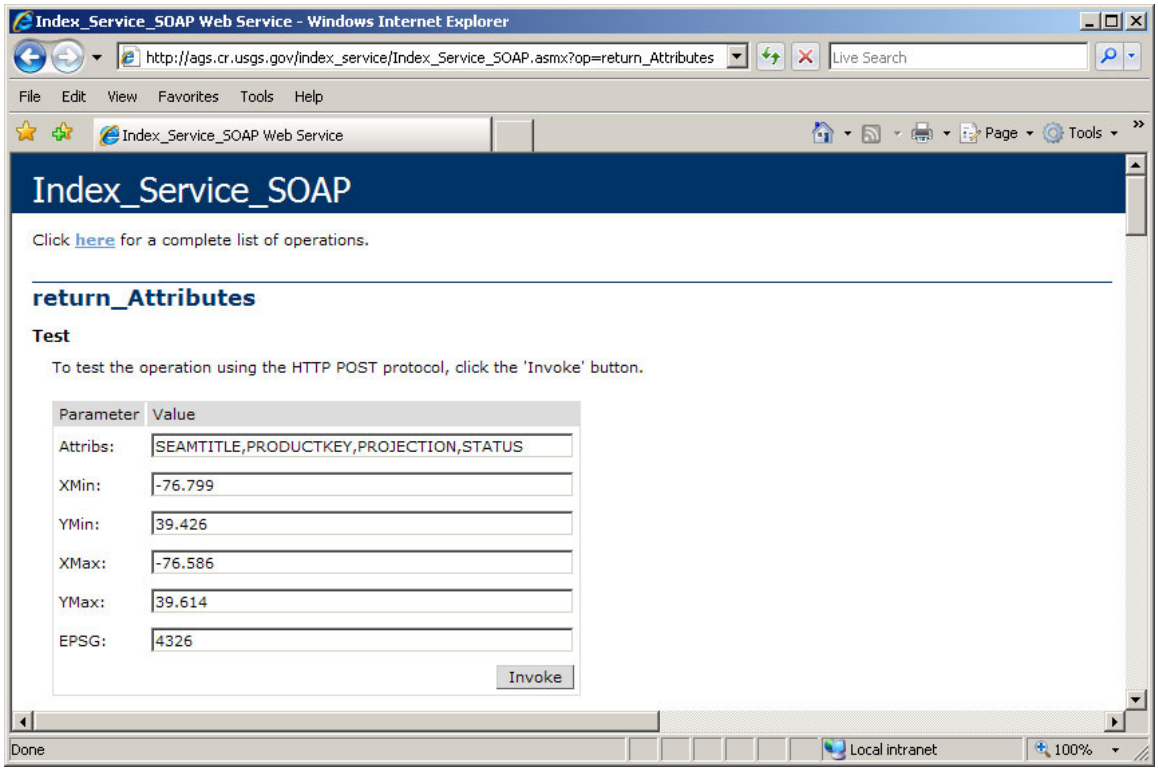


2.3 return_Attributes

This is the method that is used to return information for a specific geographic area. Three data themes are currently queried – Elevation, Land Cover, and Orthoimagery. As its input it requires a comma separated list of desired attributes (obtained from **return_Attribute_List** method described above), a geographic area of interest, and a projection code. Currently, the only projection code that can be used is:

4326: Geographic WGS-84

Using the test page, here is an example for the Baltimore County, MD area. Our query will look like this:



This query is asking for four attributes to be returned for each product that intersects the area of interest. When we invoke this method we see quite a bit of information returned – the four attributes we requested for each product from the USGS EROS Seamless or Tiled inventories that has been intersected.

A partial listing of the results is as follows:

```
<ArrayOfCustomAttributes>
  <CustomAttributes>
        <AttribName>SEAMTITLE</AttribName>
        <AttribValue>Mar 2007 Color Orthoimagery - Baltimore County,
  MD</AttribValue>
```

```
    </CustomAttributes>
    <CustomAttributes>
            <AttribName>PRODUCTKEY</AttribName>
            <AttribValue>VEQ</AttribValue>
    </CustomAttributes>
    <CustomAttributes>
            <AttribName>PROJECTION</AttribName>
            <AttribValue>SP</AttribValue>
    </CustomAttributes>
    <CustomAttributes>
            <AttribName>STATUS</AttribName>
            <AttribValue>Seamless</AttribValue>
    </CustomAttributes>
 </ArrayOfCustomAttributes>
```

This tells us that there is a Seamless dataset called "Mar 2007 Color Orthoimagery - Baltimore County, MD", with a productkey of "VEQ", in a State Plane projection.

Further down in the results is another product…

```
<ArrayOfCustomAttributes>
  <CustomAttributes>
            <AttribName>SEAMTITLE</AttribName>
            <AttribValue>National Elevation Dataset (1 arc second)</AttribValue>
  </CustomAttributes>
  <CustomAttributes>
            <AttribName>PRODUCTKEY</AttribName>
            <AttribValue>NED</AttribValue>
  </CustomAttributes>
  <CustomAttributes>
            <AttribName>PROJECTION</AttribName>
            <AttribValue>Geographic NAD83</AttribValue>
  </CustomAttributes>
  <CustomAttributes>
            <AttribName>STATUS</AttribName>
            <AttribValue>Seamless</AttribValue>
  </CustomAttributes>
</ArrayOfCustomAttributes>
```

This set of tags describes a Seamless dataset called "National Elevation Dataset (1 arc second)", with a productkey of "NED", in a geographic NAD83 coordinate system.

Therefore, this method can be used to retrieve whatever information you desire regarding datasets in your particular area or interest. This information can then be presented to the user in your particular application depending on your needs.

2.4 return_Attributes_By_Theme

This method returns requested attributes by querying the datasets you include as a comma-delimited list of THEMES, or leave the ThemeList blank to return all.

2.5 return_Attributes_Elevation

This method returns requested attributes by querying only those datasets in the Elevation theme.

2.6 return_Attributes_LandCover

This method returns requested attributes by querying only those datasets in the Land Cover theme.

2.7 return_Attributes_Ortho

This method returns requested attributes by querying only those datasets in the Orthoimagery theme.

2.8 return_Download_Options

Downloadable datasets are available to the public by including some user-defined options when submitting a download request. Current options are 1) the output format, 2) the type of metadata included in the download bundle, and 3) the type of file compression for the download bundle. Use this method to find out which of these options are available for a specific product. This method takes a PRODUCTKEY as input and returns the valid output formats, compression formats and metadata formats for this product.

If we use the PRODUCTKEY of VEQ as our input, we get back this set of tags:

```
<DownloadOptions>
    <productid>veq</productid>
    <type>SDDS</type>
    <outputformat>02-GeoTIFF,12-IMG,13-JPG,14-JPG2000</outputformat>
    <compressionformat>Z-ZIP,T-TGZ</compressionformat>
    <metadataformat>H-HTML,T-TXT,X-XML</metadataformat>
</DownloadOptions>
```

The "outputformat" tag tells us that this product is available in four formats: GeoTIFF, IMG, JPEG, and JPEG 2000 format.

The "compressionformat" tag describes the possible bundling options: a zip file or as a tar-gzipped file.

The "metadataformat" tag describes the formats of the metadata that can be requested: html, text or xml.

This information is required if you are going to request the data for downloading. When you request a product for download, you must also specify the desired output format, metadata format and bundling method.

2.9 return_LYR_URL

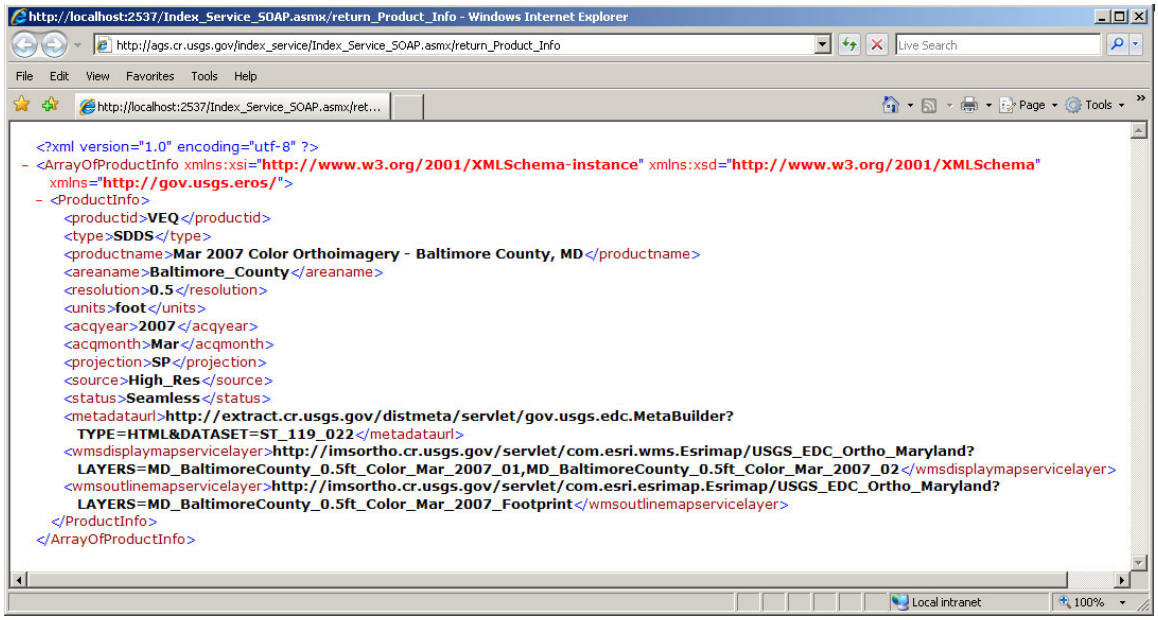
This method can be used for obtaining a URL to the LYR file corresponding to the ServiceName you input.

2.10 return_Meta_URLs

This method returns a list of URLs that can be used to look at the html metadata without downloading the data first.

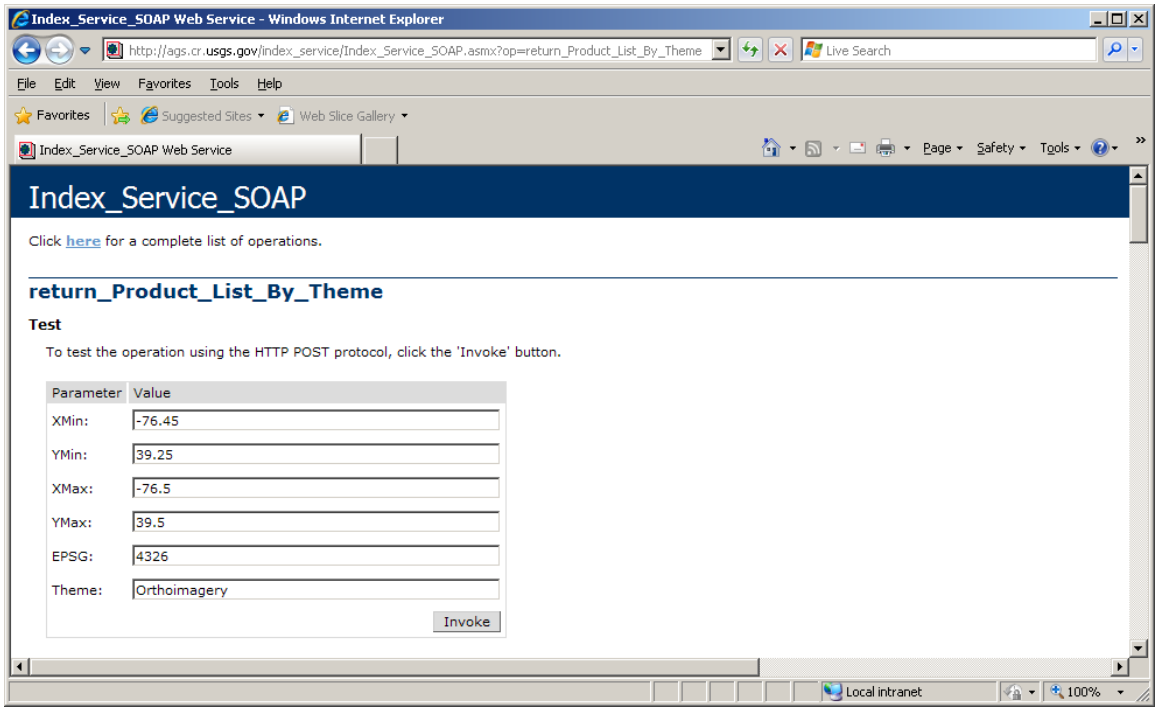
2.11 return_Product_Info

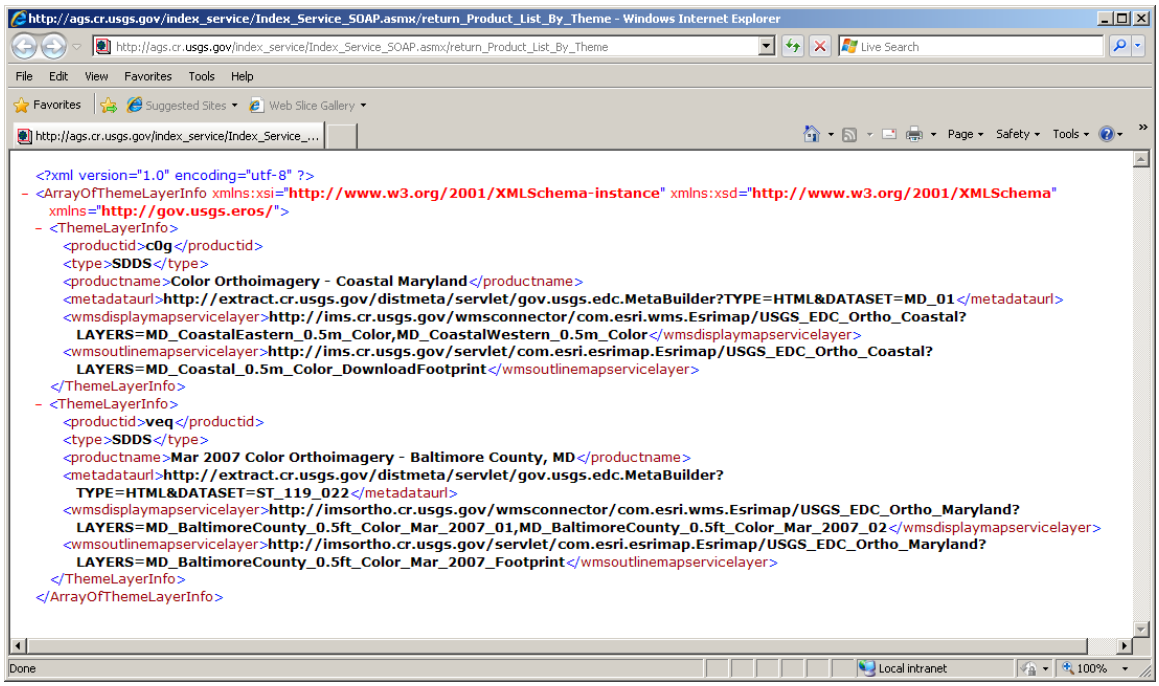
This method can be used for obtaining a few pre-defined attributes related to a particular dataset. For example, we submitted a productID of "veq" to obtain product information about the Baltimore County dataset. The data that was returned includes the pixel resolution, acquisition date, a metadata URL, and information that can be used to make a WMS image request.



2.12 return_Product_List_By_Theme

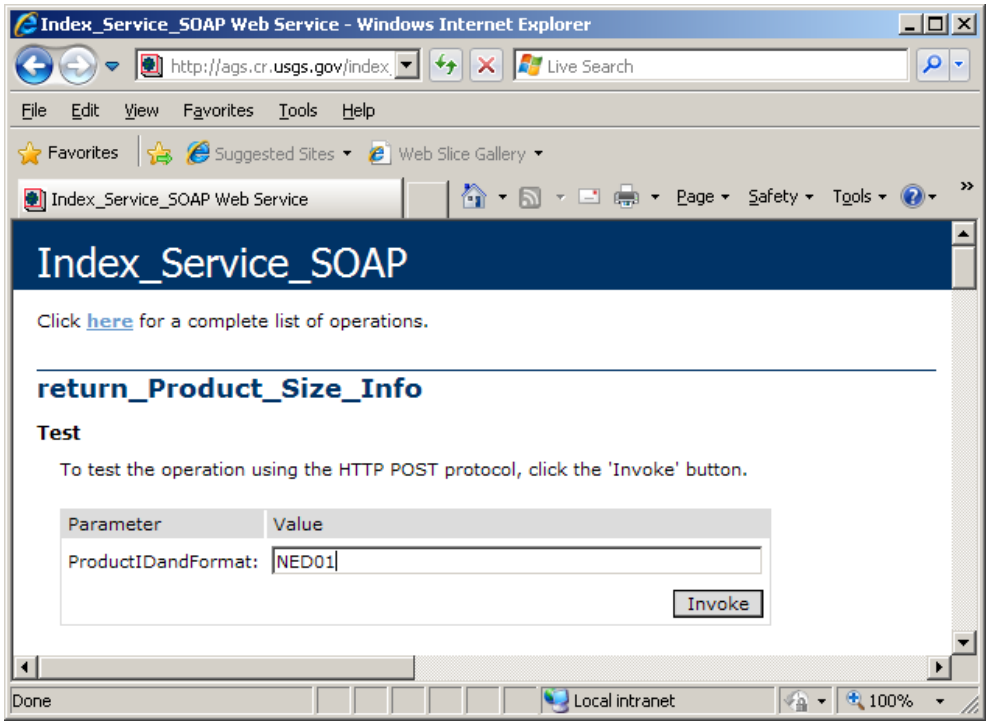
This method can be used for obtaining a list of all products in a particular theme that intersect with a particular geographic area. The following example found two orthoimagery datasets in the test area.

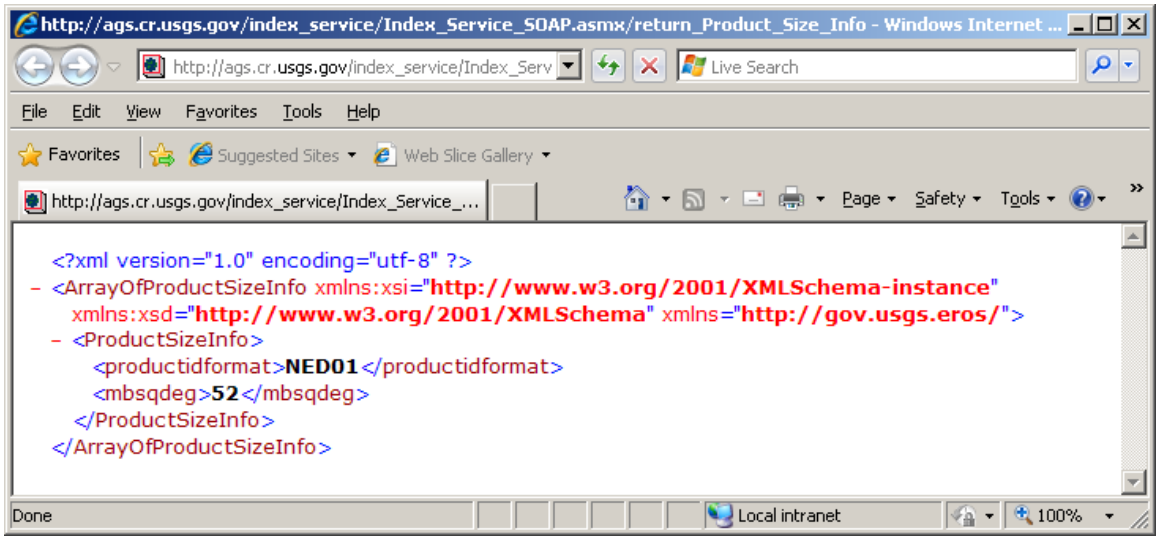




2.13 return_Product_Size_Info

Given a product key and desired output format, this method returns the estimated file size in MB per square degree. Using this value and your area of interest, you can then estimate the total size in MB of your requested area.





2.14 return_Theme_List_By_ProductID

This method returns a list of those themes which contain the specific product.

2.15 return_Themes

Various datasets have been assigned to one or more data "themes". Use this method to obtain the current list of themes and their corresponding theme IDs.

2.16 return_WMS_URLs

Use this method to obtain pre-made example URLs for WMS requests for a specific geographic area. Three data themes are currently queried – Elevation, Land Cover, and Orthoimagery. Note that the particular mapservice may not honor the requests with a valid image if the mapservice has pre-defined limits based on scale or other factors. These URLs serve only as examples that can be modified as needed. Datasets that reside on USGS EROS on-line systems will have valid WMS URLs. "Historical" datasets that have been demoted to near-line systems have been removed from the map services and therefore will no longer have WMS information contained in their records.

2.17 return_WMS_URLs_ORTHO

Use this method to obtain pre-made example URLs for WMS requests for a specific geographic area. Only Orthoimagery datasets are queried. Note that the particular mapservice may not honor the requests with a valid image if the mapservice has pre-defined limits based on scale or other factors. These URLs serve only as examples that can be modified as needed. Datasets that reside on USGS EROS on-line systems will have valid WMS URLs. "Historical" datasets that have been demoted to near-line systems have been removed from the map services and therefore will no longer have WMS information contained in their records.

3 JSON INTERFACE

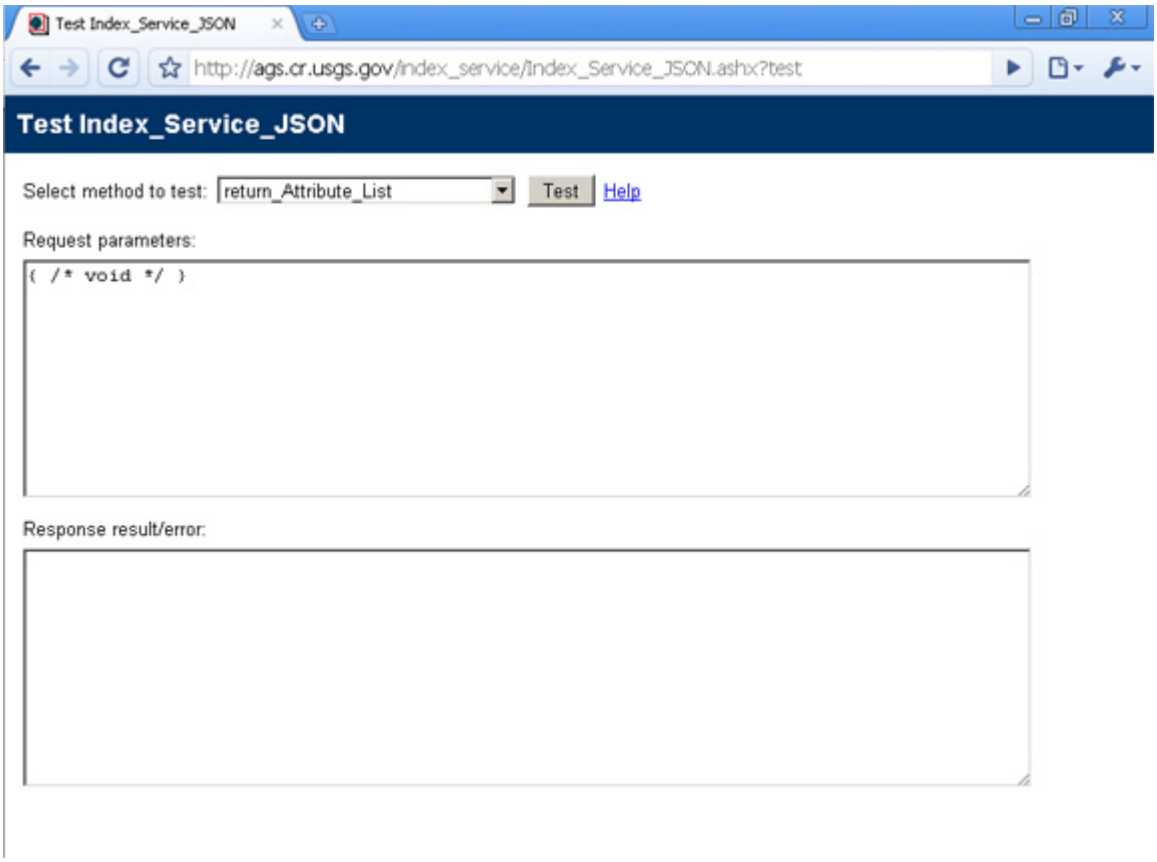
3.1 Overview

Use the following link to view the available methods.

http://ags.cr.usgs.gov/index_service/Index_Service_JSON.ashx

A simple test page is also available for use in a browser to see the methods that can be called in the Inventory Service:

http://ags.cr.usgs.gov/index_service/Index_Service_JSON.ashx?test



3.2 return_Attribute_List

This method returns a list of ALL of the attributes that are available for querying per dataset. Note that each of these attributes is not guaranteed to be populated for every dataset, although most are. For example, a "view-only" dataset will have a blank entry for the PRODUCTKEY attribute which designates the USGS internal download code for that dataset. Please refer to the document "Inventory Web Service Attribute Descriptions" for a text description of the meaning of each attribute and possible values for each attribute.

3.3 return_Attributes

This is the method that is used to return information for a specific geographic area. Three data themes are currently queried – Elevation, Land Cover, and Orthoimagery. As its input it requires a comma separated list of desired attributes (obtained from **return_Attribute_List** method described above), a geographic area of interest, and a projection code. Currently, the only projection code that can be used is:

4326: Geographic WGS-84

Using the test page, here is an example for the Baltimore County, MD area. Our query will look like this:

When we invoke this method we get quite a few records returned – each record is a product from the USGS EROS Seamless or Tiled inventories.

Let's look at the record describing the NAIP UTM Zone 18N data for this geographic area:


```
[
        {"attribName":"AREA_NAME","attribValue":"Maryland"},
        {"attribName":"STATE_ABR","attribValue":"MD"},
        {"attribName":"PROJECTION","attribValue":"UTM"},
        {"attribName":"SEAMTITLE","attribValue":"NAIP UTM Zone 18N"},
        {"attribName":"PRODUCTKEY","attribValue":"N18"}
]
```


3.4 return_Attributes_By_Theme

This method returns requested attributes by querying the datasets you include as a comma-delimited list of THEMES, or leave the ThemeList blank to return all.

3.5 return_Attributes_Elevation

This method returns requested attributes by querying only those datasets in the Elevation theme.

3.6 return_Attributes_LandCover

This method returns requested attributes by querying only those datasets in the Land Cover theme.

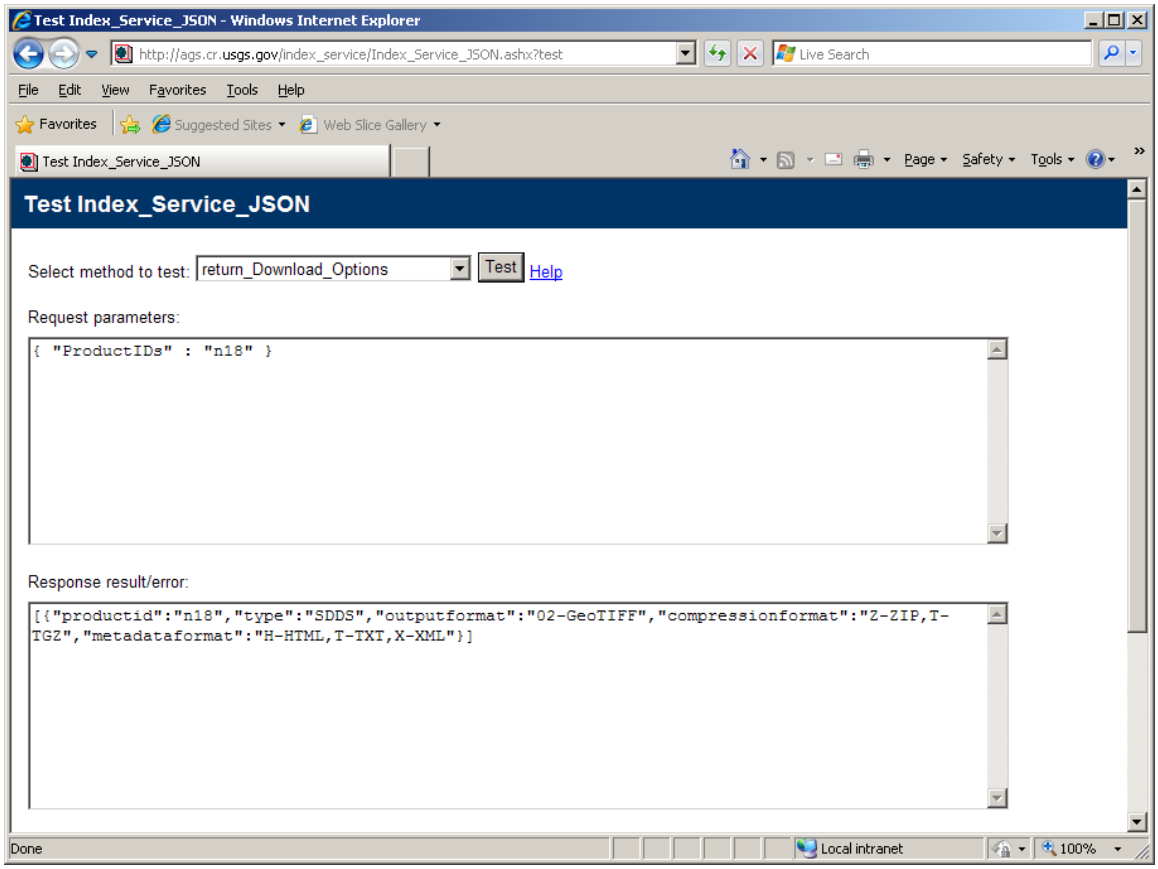
3.7 return_Attributes_Ortho

This method returns requested attributes by querying only those datasets in the Orthoimagery theme.

3.8 return_Download_Options

Downloadable datasets are available with some user-defined options. Current options are output format, type of metadata included in the download bundle, and the type of file compression for the download bundle. Use this method to find out which of these options are available for a specific product. This method takes a PRODUCTKEY as input and returns the valid output formats, compression formats and metadata formats for this product.

If we use the PRODUCTKEY of n18 as our input we get back:



Outputformat tells us that this product is available only in GeoTIFF format.

Compressionformat gives us the option of getting the data back in a zip file or a tar gzipped file.

Metadataformat gives us the option of how we want the metadata formatted: html, text or xml.

3.9 return_LYR_URL

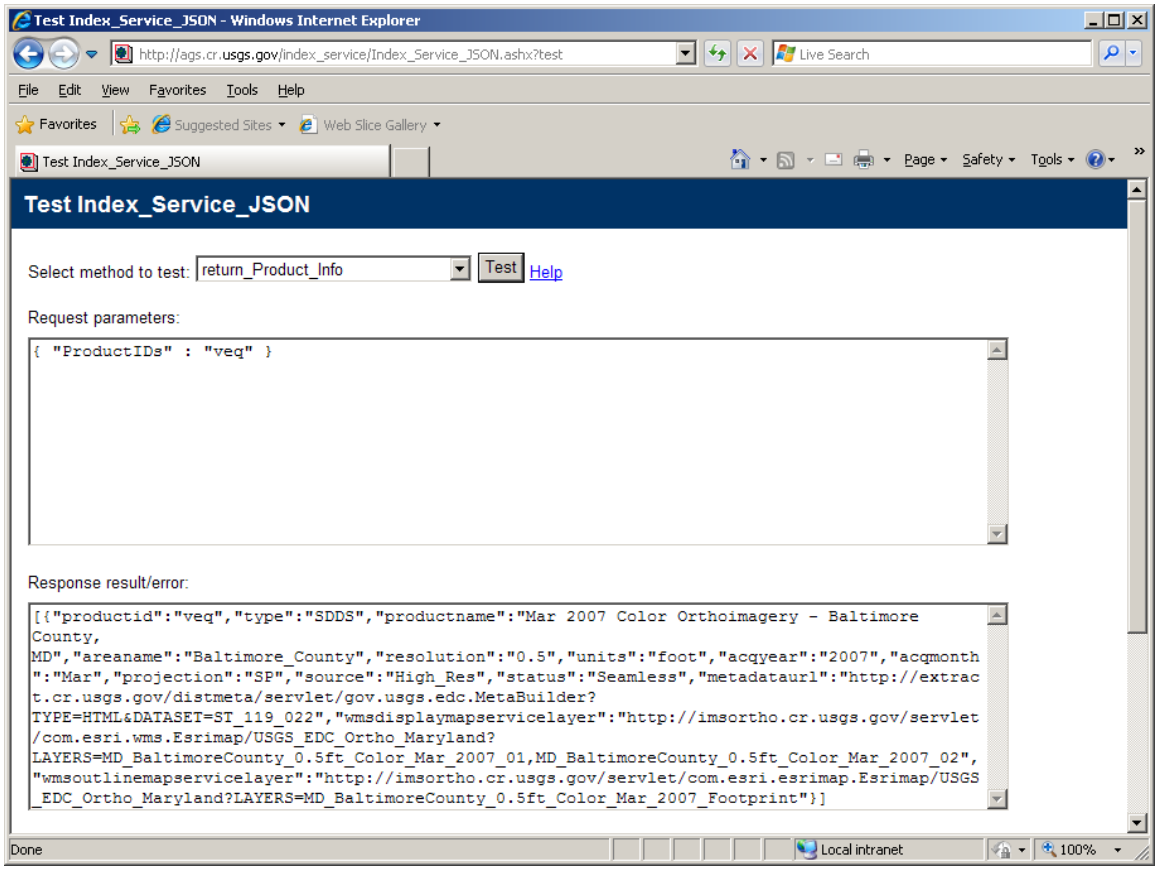
This method can be used for obtaining a URL to the LYR file corresponding to the ServiceName you input.

3.10 return_Meta_URLs

This method returns a list of URLs that can be used to look at the html metadata without downloading the data first.

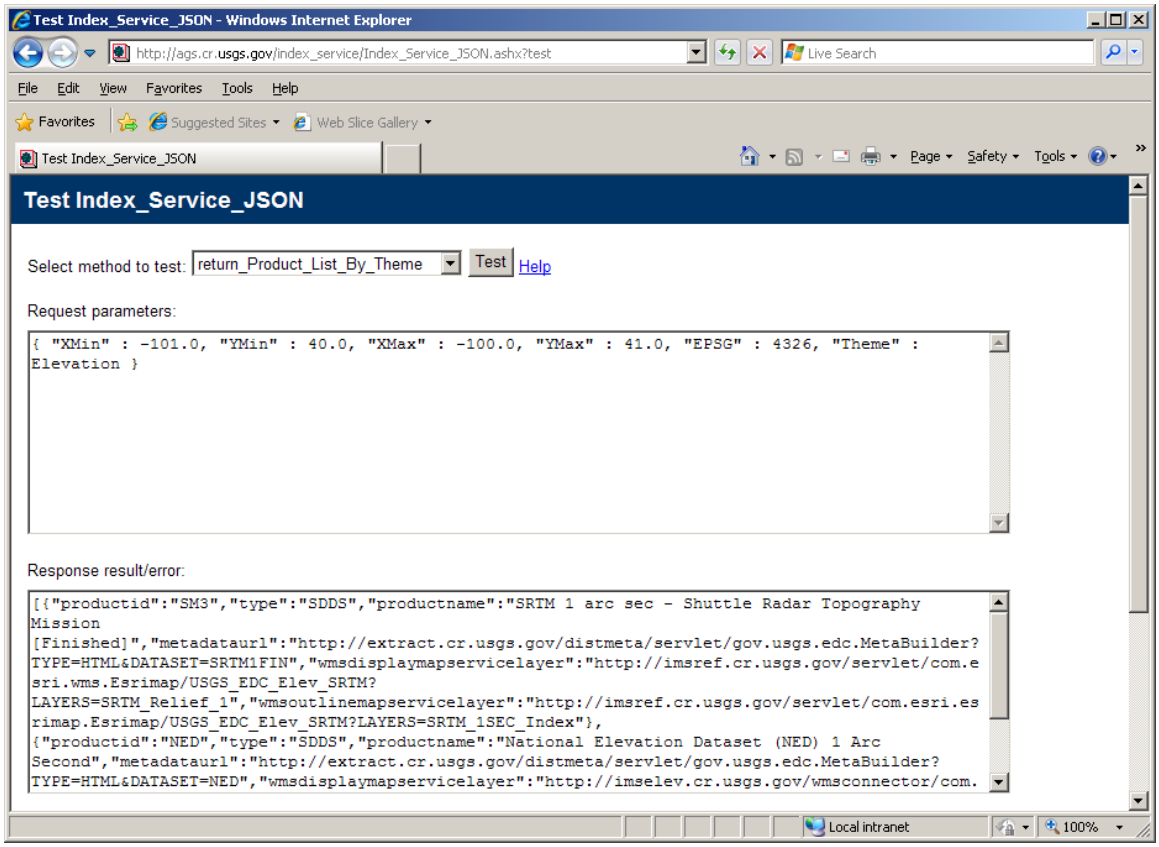
3.11 return_Product_Info

This method can be used for obtaining a few pre-defined attributes related to a particular dataset. For example, we submitted a productID of "veq" to obtain product information about the Baltimore County dataset. The data that was returned includes the pixel resolution, acquisition date, a metadata URL, and information that can be used to make a WMS image request.



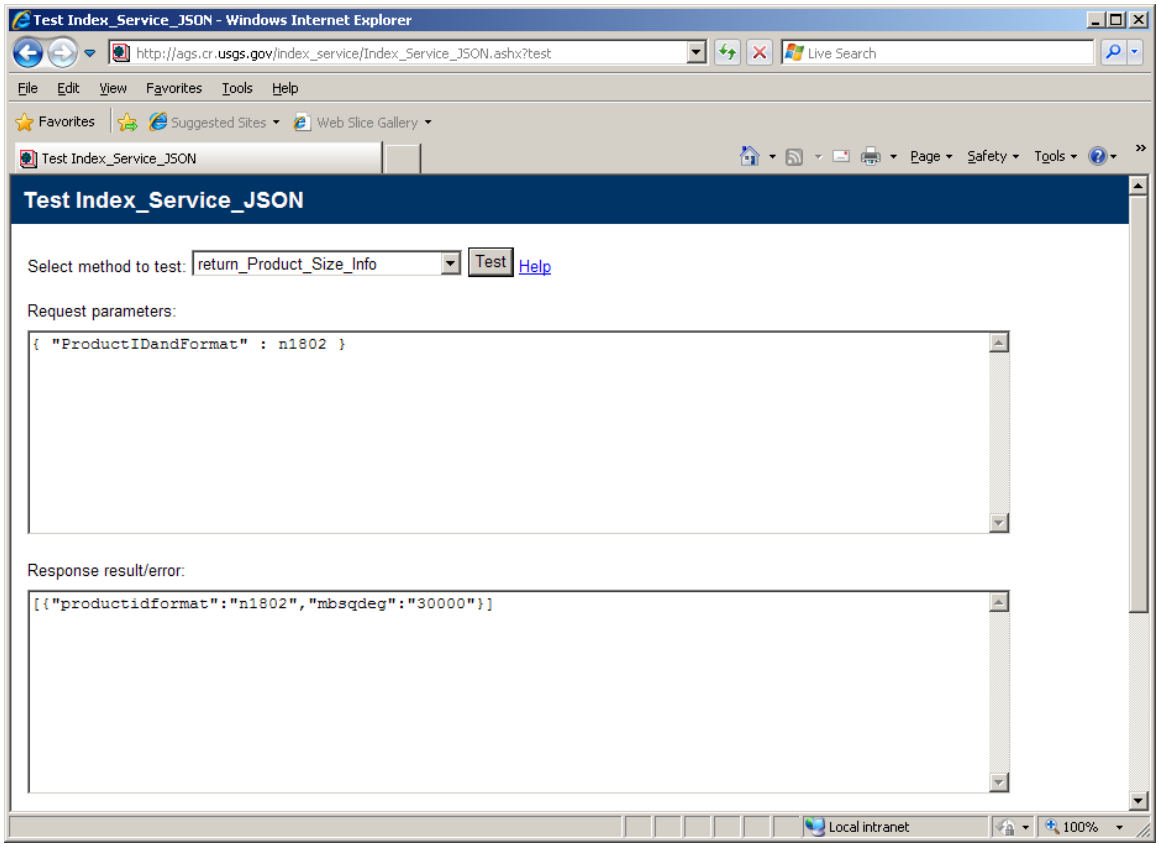
3.12 return_Product_List_By_Theme

This method can be used for obtaining a list of all products in a particular theme that intersect with a particular geographic area. The following example found at least two elevation datasets in the test area.



3.13 return_Product_Size_Info

Given a product key and desired output format, this method returns the estimated file size in MB per square degree. Using this value and your area of interest, you can then estimate the total size in MB of your requested area. This example uses PRODUCTID (also called PRODUCTKEY) n18 and desired output format 02 (GeoTIFF).



3.14 return_Theme_List_By_ProductID

This method returns a list of those themes which contain the specific product.

3.15 return_Themes

Various datasets have been assigned to one or more data “themes”. Use this method to obtain the current list of themes and their corresponding theme IDs.

3.16 return_WMS_URLs

Use this method to obtain pre-made example URLs for WMS requests for a specific geographic area. Three data themes are currently queried – Elevation, Land Cover, and Orthoimagery. Note that the particular mapservice may not honor the requests with a valid image if the mapservice has pre-defined limits based on scale or other factors. These URLs serve only as examples that can be modified as needed. Datasets that reside on USGS EROS on-line systems will have valid WMS URLs. "Historical" datasets that have been demoted to near-line systems have been removed from the map services and therefore will no longer have WMS information contained in their records.

3.17 return_WMS_URLs_ORTHO

Use this method to obtain pre-made example URLs for WMS requests for a specific geographic area. Only Orthoimagery datasets are queried. Note that the particular mapservice may not honor the requests with a valid image if the mapservice has pre-defined limits based on scale or other factors. These URLs serve only as examples that can be modified as needed. Datasets that reside on USGS EROS on-line systems will have valid WMS URLs. "Historical" datasets that have been demoted to near-line systems have been removed from the map services and therefore will no longer have WMS information contained in their records.

4 JSON2 INTERFACE

4.1 Overview

Use the following link to the web service description language (wsdl) page to examine the available methods and necessary data types.
http://ags.cr.usgs.gov/index_service/Index_Service_JSON2.asmx?wsdl

A simple test page is also available for use in a browser to see the methods that can be called in the Inventory Service:
http://ags.cr.usgs.gov/index_service/Index_Service_JSON2.asmx

All methods in this interface accept a Callback function as a parameter.

4.2 return_Attribute_List

This method returns a list of ALL of the attributes that are available for querying per dataset. Note that each of these attributes is not guaranteed to be populated for every dataset, although most are. For example, a "view-only" dataset will have a blank entry for the PRODUCTKEY attribute which designates the USGS internal download code for that dataset. Please refer to the document "Inventory Web Service Attribute Descriptions" for a text description of the meaning of each attribute and possible values for each attribute.

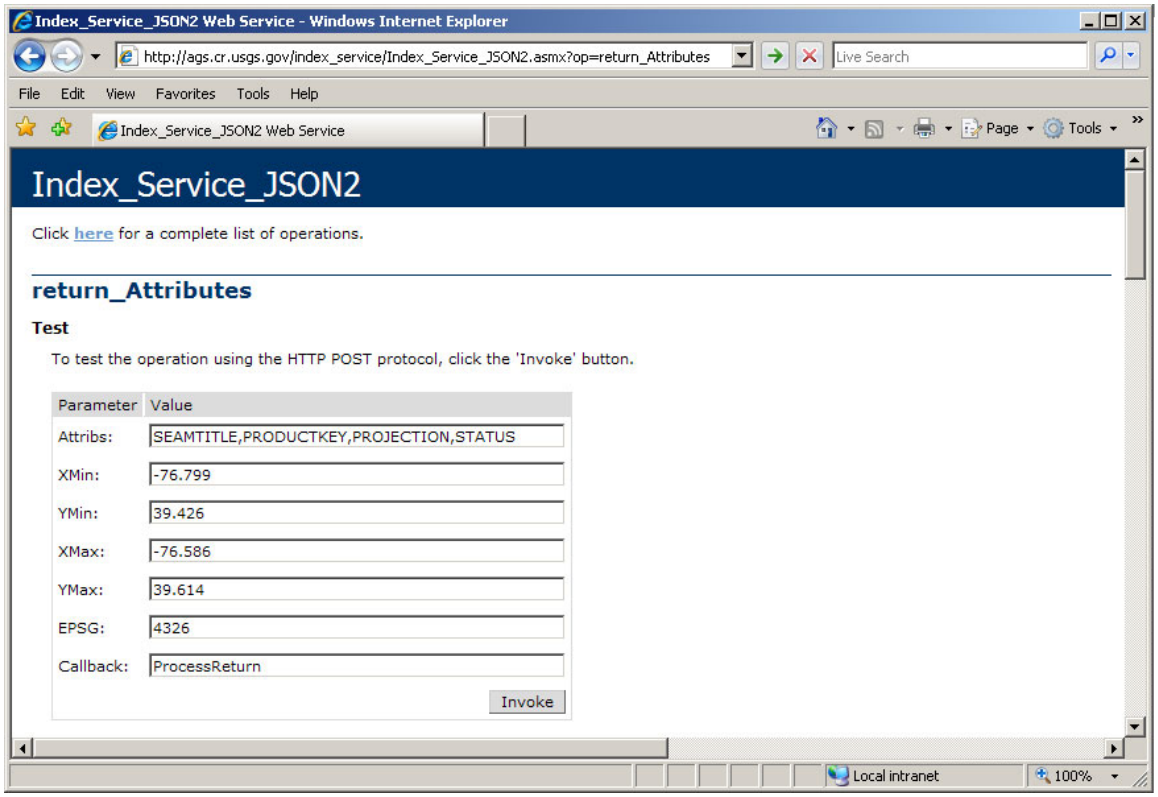

```
{
     "identifier":"ID","label":"name","items":[
          {"ID":0,"name":"AREA_NAME"},
          {"ID":1,"name":"RESOLUTION"},
          {"ID":2,"name":"UNITS"},
          {"ID":3,"name":"STATE_ABR"},
          {"ID":4,"name":"SQ_MI"},
          {"ID":5,"name":"SQ_KM"},
          {"ID":6,"name":"PER_COV"},
          {"ID":7,"name":"QUAD_EQ"},
          {"ID":8,"name":"ACQ_YEAR"},
          {"ID":9,"name":"ACQ_MONTH"},
          {"ID":10,"name":"AVAI_SDDS"},
          {"ID":11,"name":"FEATURES"},
          {"ID":12,"name":"TYPE"},
          {"ID":13,"name":"GB_RAW"},
          {"ID":14,"name":"GB_SDE"},
          {"ID":15,"name":"STATE_NAME"},
          {"ID":16,"name":"USE_RESTRC"},
          {"ID":17,"name":"PROJECTION"},
          {"ID":18,"name":"SOURCE"},
          {"ID":19,"name":"STATUS"},
          {"ID":20,"name":"AVAI_NGTOC"},
          {"ID":21,"name":"AVAI_TDDS"},
          {"ID":22,"name":"REMV_SDDS"},
          {"ID":23,"name":"NGTOC"},
          {"ID":24,"name":"STOR_LOC"},
          {"ID":25,"name":"WMS_LYR"},
          {"ID":26,"name":"WMS_SRVC"},
          {"ID":27,"name":"WMS_SRVR"},
          {"ID":28,"name":"WMS_URL"},
          {"ID":29,"name":"META_URL"},
          {"ID":30,"name":"U_SCALE"},
          {"ID":31,"name":"L_SCALE"},
          {"ID":32,"name":"FEMA_WT"},
          {"ID":33,"name":"SEAMTITLE"},
          {"ID":34,"name":"PRODUCTKEY"},
          {"ID":35,"name":"BBOX_WSEN"},
          {"ID":36,"name":"Shape_Leng"},
          {"ID":37,"name":"Shape_Length"},
          {"ID":38,"name":"Shape_Area"},
          {"ID":39,"name":"LYR_URL"}
     ]
}
```

4.3 return_Attributes

This is the method that is used to return information for a specific geographic area. Three data themes are currently queried – Elevation, Land Cover, and Orthoimagery. As its input it requires a comma separated list of desired attributes (obtained from **return_Attribute_List** method described above), a geographic area of interest, and a projection code. Currently, the only projection code that can be used is:

4326: Geographic WGS-84

Using the test page, here is an example for the Baltimore County, MD area. Our query will look like this:



This query is asking for four attributes to be returned for each product that intersects the area of interest. When we invoke this method we see quite a bit of information returned – the four attributes we requested for each product from the USGS EROS Seamless or Tiled inventories that has been intersected.

A partial listing of the results is as follows:


```
{
        "identifier":"ID","label":"ID","items":[
                {
                        ID":0,
```

```
                "SEAMTITLE":"Mar 2007 Color Orthoimagery - Baltimore County, MD",
                "PRODUCTKEY":"VEQ",
                "PROJECTION":"SP",
                "STATUS":"Seamless"
            }
        ]
}
```


This tells us that there is a Seamless dataset called “Mar 2007 Color Orthoimagery - Baltimore County, MD”, with a productkey of “VEQ”, in a State Plane projection.

Further down in the results is another product…


```
{
        "ID":6,
        "SEAMTITLE":"National Elevation Dataset (1 arc second)",
        "PRODUCTKEY":"NED",
        "PROJECTION":"Geographic NAD83",
        "STATUS":"Seamless"
}
```


This set of tags describes a Seamless dataset called “National Elevation Dataset (1 arc second)”, with a productkey of “NED”, in a geographic NAD83 coordinate system.

Therefore, this method can be used to retrieve whatever information you desire regarding datasets in your particular area or interest. This information can then be presented to the user in your particular application depending on your needs.

4.4 return_Attributes_By_Theme

This method returns requested attributes by querying the datasets you include as a comma-delimited list of THEMES, or leave the ThemeList blank to return all.

4.5 return_Attributes_Elevation

This method returns requested attributes by querying only those datasets in the Elevation theme.

4.6 return_Attributes_LandCover

This method returns requested attributes by querying only those datasets in the Land Cover theme.

4.7 return_Attributes_Ortho

This method returns requested attributes by querying only those datasets in the Orthoimagery theme.

4.8 return_Download_Options

Downloadable datasets are available to the public by including some user-defined options when submitting a download request. Current options are 1) the output format, 2) the type of metadata included in the download bundle, and 3) the type of file compression for the download bundle. Use this method to find out which of these options are available for a specific product. This method takes a PRODUCTKEY as input and returns the valid output formats, compression formats and metadata formats for this product.

If we use the PRODUCTKEY of VEQ as our input, we get back this result:


```
{
        "identifier":"ID","label":"productid","items":[
                {
                        "ID":0,
                        "compressionformat":"Z-ZIP,T-TGZ",
                        "metadataformat":"H-HTML,T-TXT,X-XML",
                        "outputformat":"02-GeoTIFF,12-IMG,13-JPG,14-JPG2000",
                        "productid":"veq",
                        "type":"SDDS"
                }
        ]
}
```


The “outputformat” key tells us that this product is available in four formats: GeoTIFF, IMG, JPEG, and JPEG 2000 format.

The “compressionformat” tag describes the possible bundling options: a zip file or as a tar-gzipped file.

The “metadataformat” tag describes the formats of the metadata that can be requested: html, text or xml.

This information is required if you are going to request the data for downloading. When you request a product for download, you must also specify the desired output format, metadata format and bundling method.

4.9 return_LYR_URL

This method can be used for obtaining a URL to the LYR file corresponding to the ServiceName you input.

4.10 return_Meta_URLs

This method returns a list of URLs that can be used to look at the html metadata without downloading the data first.

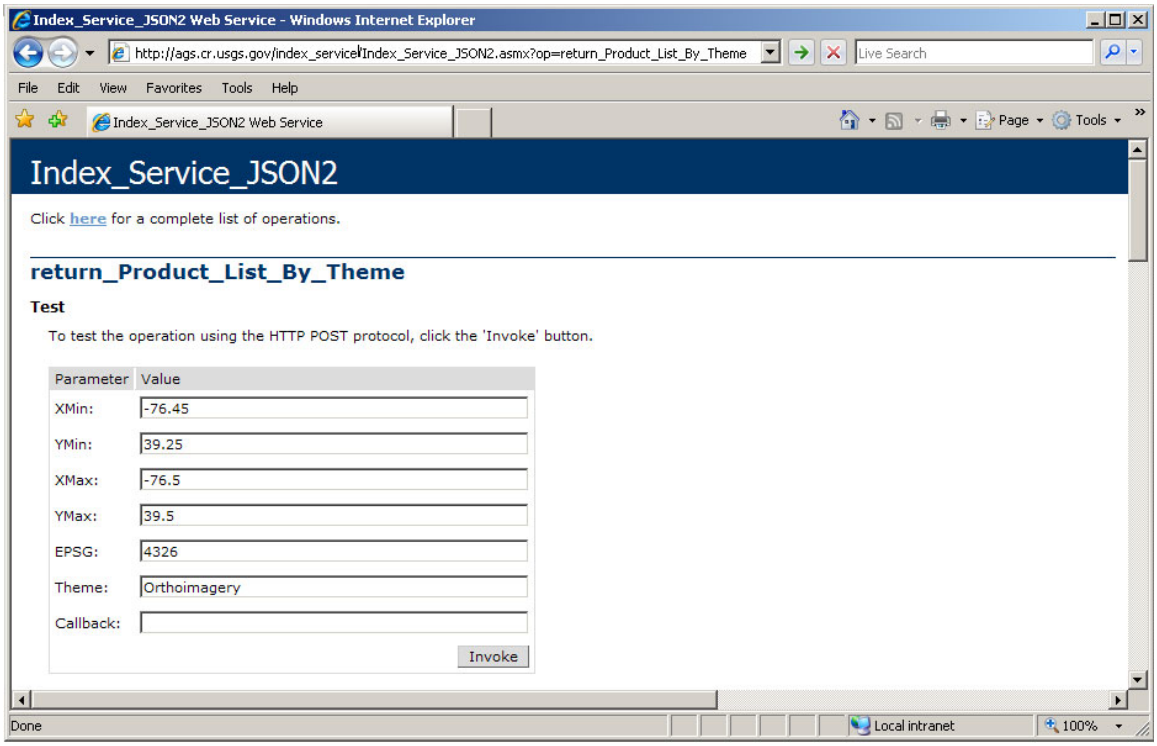
4.11 return_Product_Info

This method can be used for obtaining a few pre-defined attributes related to a particular dataset. For example, we submitted a productID of "veq" to obtain product information about the Baltimore County dataset. The data that was returned includes the pixel resolution, acquisition date, a metadata URL, and information that can be used to make a WMS image request.


```
{
	"identifier":"ID","label":"productid","items":[
		{
			"ID":0,
			"compressionformat":"Z-ZIP,T-TGZ",
			"metadataformat":"H-HTML,T-TXT,X-XML",
			"outputformat":"02-GeoTIFF,12-IMG,13-JPG,14-JPG2000",
			"productid":"veq",
			"type":"SDDS"
		}
	]
}
```

4.12 return_Product_List_By_Theme

This method can be used for obtaining a list of all products in a particular theme that intersect with a particular geographic area. The following example found two orthoimagery datasets in the test area.

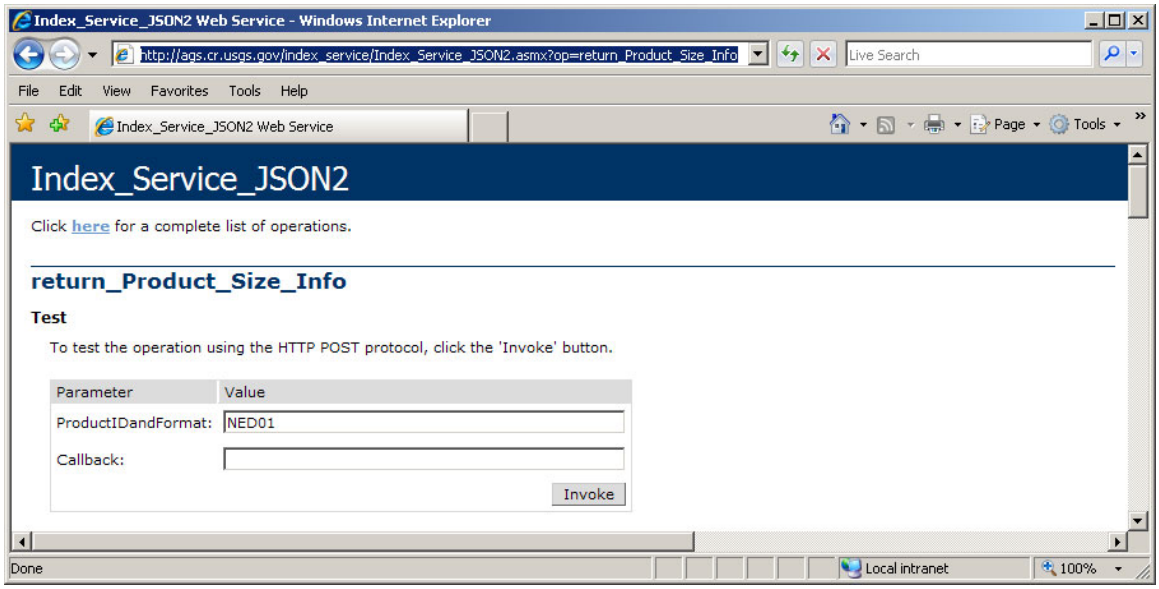


{
"identifier":"ID","label":"productname","items":[
{
"ID":0,"metadataurl":"http://extract.cr.usgs.gov/distmeta/servlet/gov.usgs.edc.MetaBuilder?TYPE=HTML&DATASET=NAIP_Z18","productid":"n18","productname":"NAIP (3 Band) UTM Zone 18N","type":"SDDS","wmsdisplaymapservicelayer":"http://isse.cr.usgs.gov/ArcGIS/services/Combined/USGS_EDC_Ortho_NAIP/MapServer/WMSServer/?LAYERS=0","wmsoutlinemapservicelayer":http://imsortho.cr.usgs.gov/servlet/com.esri.esrimap.Esrimap/USGS_EDC_Ortho_NAIP_Grid?LAYERS=NAIP_UTM18_3BAND_FOOTPRINT
},
{
"ID":1,"metadataurl":"http://extract.cr.usgs.gov/distmeta/servlet/gov.usgs.edc.MetaBuilder?TYPE=HTML&DATASET=MD_01","productid":"c0g","productname":"Color Orthoimagery - Coastal Maryland","type":"SDDS","wmsdisplaymapservicelayer":"http://ims.cr.usgs.gov/servlet/com.esri.wms.Esrimap/USGS_EDC_Ortho_Coastal?LAYERS=MD_CoastalEastern_0.5m_Color,MD_CoastalWestern_0.5m_Color",

"wmsoutlinemapservicelayer":http://ims.cr.usgs.gov/servlet/com.esri.esrimap.Esrimap/USGS_EDC_Ortho_Coastal?LAYERS=MD_Coastal_0.5m_Color_DownloadFootprint
},
{
"ID":2,"metadataurl":"http://extract.cr.usgs.gov/distmeta/servlet/gov.usgs.edc.MetaBuilder?TYPE=HTML&DATASET=ST_119_022","productid":"veq","productname":"Mar 2007 Color Orthoimagery - Baltimore County, MD","type":"SDDS","wmsdisplaymapservicelayer":"http://imsortho.cr.usgs.gov/servlet/com.esri.wms.Esrimap/USGS_EDC_Ortho_Maryland?LAYERS=MD_BaltimoreCounty_0.5ft_Color_Mar_2007_01,MD_BaltimoreCounty_0.5ft_Color_Mar_2007_02","wmsoutlinemapservicelayer":http://imsortho.cr.usgs.gov/servlet/com.esri.esrimap.Esrimap/USGS_EDC_Ortho_Maryland?LAYERS=MD_BaltimoreCounty_0.5ft_Color_Mar_2007_Footprint
}
]
}

4.13 return_Product_Size_Info

Given a product key and desired output format, this method returns the estimated file size in MB per square degree. Using this value and your area of interest, you can then estimate the total size in MB of your requested area.



```
{
	"identifier":"ID","label":"productidformat","items":[
		{
			"ID":0,"mbsqdeg":"52","productidformat":"NED01"
		}
	]
}
```


4.14 return_Theme_List_By_ProductID

This method returns a list of those themes which contain the specific product.

4.15 return_Themes

Various datasets have been assigned to one or more data "themes". Use this method to obtain the current list of themes and their corresponding theme IDs.

4.16 return_WMS_URLs

Use this method to obtain pre-made example URLs for WMS requests for a specific geographic area. Three data themes are currently queried – Elevation, Land Cover, and Orthoimagery. Note that the particular mapservice may not honor the requests with a valid image if the mapservice has pre-defined limits based on scale or other factors. These URLs serve only as examples that can be modified as needed. Datasets that reside on USGS EROS on-line systems will have valid WMS URLs. "Historical" datasets that have been demoted to near-line systems have been removed from the map services and therefore will no longer have WMS information contained in their records.

4.17 return_WMS_URLs_ORTHO

Use this method to obtain pre-made example URLs for WMS requests for a specific geographic area. Only Orthoimagery datasets are queried. Note that the particular mapservice may not honor the requests with a valid image if the mapservice has pre-defined limits based on scale or other factors. These URLs serve only as examples that can be modified as needed. Datasets that reside on USGS EROS on-line systems will have valid WMS URLs. "Historical" datasets that have been demoted to near-line systems have been removed from the map services and therefore will no longer have WMS information contained in their records.